

DRY PAINT TRANSFER PROCESS AND PRODUCT5 ABSTRACT OF THE DISCLOSURE

10 An automotive quality paint coat is laminated to the exterior surface of a molded plastic car body member or panel. In one embodiment, the paint coat includes an exterior clear coat above a color coat. During processing, the clear coat and color coat are each coated on a temporary flexible casting sheet and dried. A high gloss surface is transferred to the clear coat from the casting sheet. The paint coat is then transferred from the casting sheet to a thin, semi-flexible thermoformable plastic backing sheet by dry paint transfer-laminating techniques. The resulting laminate is thermoformed into a complex three-dimensional shape of the car body member or panel. The preformed laminate is then bonded to an underlying plastic substrate material, by injection-cladding techniques, for example, to form the finished article. The paint coat has sufficient elongation to retain exterior automotive appearance and durability properties during thermoforming without deglossing. The backing sheet absorbs defects in the substrate material so the paint coat retains its appearance and durability properties during the injection-cladding step. The finished article comprises a high gloss, defect-free paint coat on the exterior of a molded plastic car body member or panel. Solution-form polyvinylidene fluoride/acrylic paint systems have remarkably high combined gloss and distinctiveness-of-image levels, together with durability properties required for exterior automotive use.

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